

ADVANCED FIRTREE AND BROACH SLOT FORMS
FOR TURBINE STAGE 1 AND 2 BUCKETS AND ROTOR WHEELS

ABSTRACT OF THE DISCLOSURE

A turbine bucket and wheelpost assembly reduces the
5 number of buckets in at least one of the stages of the
turbine from 92 to 60 while reducing stresses at the
assembly points of the buckets and wheelposts. The buckets
and wheelposts being formed with complementary fillets and
tang that provide for the insertion of the bucket into the
10 broach slot between two wheelposts. The angles of the tang
surfaces on both the bucket and wheelpost range from 50° to
 57° . The upper surface of the wheelpost is scalloped to
reduce weight and the tangs and fillets of both the bucket
and wheelpost are formed from curved and straight surfaces
15 to reduce stresses on the assembly.